

# ALDERLEY CONSULTING GROUP

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## SUPPORTING INFORMATION EPR Permit Application Small Pet Cremator

### STATUTORY REGULATION INSTALLATION & PROCESS DESCRIPTION POLLUTANT EMISSION CONTROL

### STACK HEIGHT CALCULATIONS & AIR QUALITY IMPACT SCREENING PERMIT CONDITIONS

VETSPEED Ltd  
TEWKESBURY Small Pet Crematorium  
Unit 5601 Shannon Place  
Shannon Way  
TEWKESBURY  
Gloucestershire  
GL20 8SL

#### PREPARED FOR:

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Project No. 61211  
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## 1.0 INTRODUCTION

The *TEWKESBURY* pet crematorium, operated by *VETSPEED Ltd*, proposes to modify processing at the Shannon Place site whereby the current less than 50 kg h<sup>-1</sup> cremation rate of operation that is presently controlled by way of Certificate Approval Number 14/275/8001/ABP/INC issued by the Agriculture, Food and Rural Communities Directorate will be extended to allow the operation of the existing small pet/animal cremator at 85 kg h<sup>-1</sup>.

Accordingly, this future operation at the site will require an EPR Part B Process Permit issued by the Tewkesbury Borough Council under the provisions of the Environmental Permitting (England & Wales) Regulations 2010 [as amended]. This Permit will require operations at site to be conducted as a Part B Process and to conform to guidance assigned by the Department for Environment, Food and Rural Affairs as set out in Process Guidance Note 5/03 of July 2013 “Statutory guidance for animal carcase incineration” PG5/03(2013)]<sup>REF1</sup>.

The proposed new destruction capacity of the site being derived by operating the existing 8-chambered individual cremation unit at 85% of its original engineering design maximum.

*VETSPEED Ltd* was established in September 1979; the Company currently operates six pet crematoria in the UK and is nationally further expanding.

The *Alderley Consulting Group* has now been retained by [REDACTED], Group Operations Manager at *VETSPEED Ltd* to assist with preparation and submission of the application for an EPR ‘Part B Process’ Permit from the Tewkesbury Borough Council. 61211-DOSSIER ONE provides the red line boundary of the proposed area of operation.

## 2.0 REGULATION OVER THE OPERATION OF SMALL PET CREMATORS

Pet cremators rated with an aggregated destruction capacity greater than 50 kilograms per operational hour fall under the provisions of the Environmental Permitting Regulations (England and Wales) Regulations 2010 [as amended]. Accordingly, an EPR Permit issued under these statutory provisions will be in force. Provided the cremation throughput is less than 10 tonnes per day, the EPR Permit is issued as a Part B Process document. Cremators with a capacity between 50-999 kg per hour also require approval under the Animal By-Products (Enforcement) (England) Regulations 2013 as regulated by the Animal & Plant Health Agency as well as the EPR permit.

This EPR Permit reflects guidance issued by the Department for Environment, Food and Rural Affairs as set out in Process Guidance Note 5/03 of July 2013 “Statutory guidance for animal carcase incineration” [PG5/03(2013)]<sup>REF1</sup>.

PG5/03(2013) allows a degree of flexibility over regulation particularly when only small cremators are involved, but the basic requirements are for the provision of proper equipment and competent procedures of operation/management of the establishment that are enforced by conditions assigned within the EPR Permit. In summary the EPR Permit conditions control the:

- type and volume of material allowed to be cremated at the establishment;

- storage of material pending cremation;
- design of the cremators;
- stack heights, pollutant emission concentrations and associated air quality impacts;
- resultant ash storage and disposal.

### 3.0 PROPOSED EQUIPMENT PROVISION, PROCESS & LAYOUT DESCRIPTION

#### 3.1 Throughput

The requested new cremation throughput capacity is to be capped at 85 kg per operational hour.

#### 3.2 Equipment To Be Operated

The existing small pet/animal carcase and animal remains cremator is kerosene fired. At  $85 \text{ kg h}^{-1}$  the cremator will produce up to  $1.157 \text{ m}^3 \text{ s}^{-1}$  of evolving gas load @  $850^\circ\text{C}$  under which conditions the secondary combustion chamber of volume of  $2.69 \text{ m}^3$  will operate with a secondary gas chamber gas residence time of slightly over 2.3 seconds.

The cremator was designed and manufactured by *Matthews Environmental Solutions Limited* of Hyde, Cheshire, UK who provides technical and engineering maintenance at the Shannon Place site.

The unit is served by a single exhaust stack with terminal diameters designed to give an efflux velocity exceeding  $15 \text{ m s}^{-1}$ .

#### **EXISTING CREMATOR 1 :**

A multi-chambered unit comprising of eight primary combustion chambers each, engineering-wise, being capable of cremating small pets up to a rate of  $13.5 \text{ kg operational hour}^{-1}$ . However, under the current Certificate Approval Number 14/275/8001/ABP/INC use of the existing cremator is time-controlled such that the cremation mass is restricted so as to not exceed  $50 \text{ kg h}^{-1}$ ; this represents circa 50% of the cremator's design capability.

An excerpt of the Manufacturers' description of the Cremator follows>>>

**CREMATOR 1**  
**DEFRA APPROVED Surefire SA50/3 kerosene fired manual load 8 chambered pet carcase cremator**

#### 3.2.1 Design

The cremator is a modern unit, designed to burn animal remains in a clean and environmentally employing a temperature-based logic control system to provide optimum control of the operating conditions.

The unit is specifically designed to be in full accordance with PG5/03(2013)<sup>REF1</sup> and the EU Animal By-Products Regulation 1069 (2009).

The unit is designed to handle small animal carcasses, animal remains and incidental veterinary packaging; operation is as a bank of eight individual small pet carcass cremators.

To ensure effective destruction of the combustion products, the unit incorporates a high-capacity thermal oxidising secondary chamber that is designed to retain the exhaust gases for at least 2 seconds at a temperature in excess of 850°C with turbulent air flow and in an oxygen rich environment.

The waste is reduced by 90-95% w/w to leave an inert ash.

### 3.2.2 Basic Plant Description & Operational Regime

The plant comprises 8 individual chambers housed in common casing, a common secondary afterburning emission control chamber and a discharge chimney.

After removing ash from the cool chambers each morning, the plant will be cycled through a Pre-heat period. During this period the afterburner operates, to elevate the secondary chamber to temperature in excess of 850°C. Once this has been achieved, after about 20 minutes, and recognised by the control system the plant automatically cycles into a Burn Period.

Individual pets shall be introduced into each chamber of the 8 chambers.

The products of combustion from the primary chambers will exhaust into the secondary chamber located above the primary for treatment. Within the secondary chamber additional heat and air are added to promote combustion in the gaseous phase. These gases will reside within the chamber at a minimum temperature of 850°C thus ensuring complete combustion of the volatile and solid particulate.

Each cremator employs a flat crematory hearth, its own ignition burner and air system. The chambers are arranged two up/two down with the products of combustion from the two lower units venting through the upper units ensuring efficient use of the exhausting heat energy.

Treated gases exit the secondary chamber, directly into the secondary chamber mounted exhaust chimney.

This process is carried out throughout the day, until the last charge has been introduced. Once introduced, the operator may select Cool Down cycle. This function automatically ensures completion of the incineration process and cycles the unit through a controlled cooling and shut down process to enable safe removal of the ash the following morning, prior to start up.

The secondary chamber incorporates several design criteria that ensure efficient combustion. The criteria are heat, oxygen, turbulence and residence. To ensure the products of combustion are sufficiently heated and oxygenated to complete combustion in the gaseous phase, both heat and oxygen in the form of air are added to the secondary chamber.

Heat input from the afterburner is controlled directly by the control system, such that in the event of temperatures in excess of 950°C ~ 1,000°C being transferred from the primary chamber the afterburner will switch to low fire to conserve fuel. Above 1,000°C the afterburner will switch off completely and combustion of the gaseous products will be sustained by air introduction alone.

During low temperatures i.e. less than 900°C, the afterburner will be signalled to fire at high rate to maintain combustion temperatures above 850°C. These operating temperatures are infinitely adjustable to promote higher operating temperatures where required.

To ensure the combustion gases are subject to adequate oxidising conditions, high-pressure air is introduced into the chamber via several jets. These air jets input turbulence into the gases and together with several internal baffles and changes of direction, ensure intimate contact between the combustion gases and the introduced heat/air.

To facilitate the installation of the individual cremators, the secondary chamber will be fitted with adjacent to the rear mounted secondary burner.

The secondary chamber is designed to retain the gases for at least 2 seconds @ 850°C.

### **3.2.3 Noise**

The maximum noise level during operational periods of the *SUREFIRE SA50/3* Cremator is 80 dB(A) @ 1 metre.

### **3.3 Material Processed At SHANNON WAY**

Material to be processed at the *SHANNON PLACE* establishment under the ‘Part B Process’ EPR Permit is to be whole carcases comprising domestic pets and anatomical waste, small farmed animals unfit for human consumption and road kill. PVC-free packaging that is used in the storage and transport of cadavers will additionally be co-burnt.

### **3.4 Day-to-Day Practice**

The routine day-to-day practice will be such that carcases are cremated with 48-hours of receipt, but in the event of exceptional circumstances carcases will be stored under refrigeration for a maximum of five days. Refrigeration capacity is circa 80 m<sup>3</sup> with a floor dimension of 5.2 m x 4.7 m. and has a capacity to store up to 18 tonnes.

Collection/delivery vehicles to be used are purpose-designed sealed units. They are not used for overnight etc. storage of cadavers.

The *SHANNON PLACE* installation will operate to a site specific Working Plan that will accord with ‘national’ *VETSPEED Ltd* practice. Completion of this Working Plan will coincide with final operational decisions. A copy of this site specific Working Plan will be submitted to the Regulator within 2-months of issue of the EPR Permit.

### **3.5 Building Layout**

The proposed building layout and basic elevations are as set out in 61211-APPENDIX TWO and 61211-DOSSIER THREE respectively; these data have been used to determine whether or not the existing stack height is adequate when the cremation throughput is increased. In terms of stack height calculations the following are the relevant architectural data:

- Roof ridge height of the Crematorium = 8.710m ‘above finished floor level;
- Highest nearby structure to stacks = 8,710m ‘above finished floor level;
- Eaves height of the Crematorium = 7.232 ‘above finished floor level;
- The existing stack height is 10.96m.

## **4.0 POLLUTANT EMISSION CONTROL & ASSOCIATED D1 CALCULATIONS**

The government publication *DISPERSION -D1*<sup>REF2</sup> has been employed to confirm the adequacy of the existing stack height with pollutant release rates being considered at the emission limit values [ELVs] as cited in the current DEFRA process guidance note PG5/03(2013)<sup>REF1</sup>. PG5/3(2013) lists the following pollutants at the stated ELVs for small pet cremators:

- total particulate matter @ 100 mg Nm<sup>-3</sup>;
- hydrogen chloride (excluding particulate matter) @ 100 mg Nm<sup>-3</sup>;
- carbon monoxide @ 100 mg Nm<sup>-3</sup> HOURLY and @ 150 mg Nm<sup>-3</sup> DAILY 95%ile;
- organic compounds as carbon (excluding particulate matter) @ 10 mg Nm<sup>-3</sup>.

For completeness and with the knowledge that nitrogen dioxide is the principal ambient air pollutant in many Local Authorities in the UK, oxides of nitrogen expressed as NO<sub>2</sub> @ 300 mg Nm<sup>-3</sup> has been included in the D1 calculations. And as the worst-case scenario NOx released has been taken as being 100% NO<sub>2</sub>. Under these extremely precautionary levels the original basic Gd and Bc[Urban Area] values as cited in the original D1 publication have been used in the calculation.

[NOTE: Nm<sup>-3</sup> refers to the reference conditions of 273K, 101.3 kPa as dry gas and corrected to 11% v/v oxygen]

Exhaust volume flow values used in the following calculations are based on statistics provided by the manufacturers of the cremator, cross-checked with historic emission monitoring previously undertaken at other sites by the *Alderley Consulting Group*. This confirms that the evolving gas load at 85 kg per hour is 1.2325 m<sup>3</sup> sec<sup>-1</sup> at 925°C that equates to 1.157 m<sup>3</sup> sec<sup>-1</sup> at 850°C.

### **4.1 BASIC ENGINEERING PARAMETERS & POLLUTANT RELEASE RATES**

From TABLE 4ONE the emission flow from the Cremator discharge stack is 1.157 Am<sup>3</sup> s<sup>-1</sup> at stack conditions of >850°C<sub>WET</sub>.

Accordingly, this gives a calculated maximum discharge stack air volume of 0.19 Nm<sup>3</sup> s<sup>-1</sup>, this value being derived from the manufacturer's specification of output at the maximum continuous rating of the cremators as tabulated below.

**TABLE 4ONE : Base Data**

<b>BASIC ENGINEERING PARAMETERS</b>	
Exhaust volume: Flow as discharged	CREMATOR 1: $1.157 \text{ Am}^3 \text{ s}^{-1}$
Temperature	$850^\circ\text{C}$ [ $1,123\text{K}$ ] minimum
Oxygen tension	13% v/v
Water content	15% v/v
Efflux velocity via designed & fitted terminal stack cone	$15.0 \text{ m s}^{-1}$
<b>Normalised flow @ STP, dry gas &amp; 11% v/v O<sub>2</sub><sup>REF2</sup></b>	
CREMATOR 1	<b>0.19 Nm<sup>3</sup> s<sup>-1</sup></b>

**4.2 POLLUTANT RELEASE RATES**

The maximum likely emission rates are set out in TABLE 3TWO below from which mass pollutant release rates have been calculated as shown. The cited emission rates are as cited in the Sector Guidance Note PG 5/3<sup>REF2</sup>. In addition, NOx as NO<sub>2</sub> is included for completeness as this is the most crucial pollutant in terms of impact on local air quality. SO<sub>2</sub> and TOC as C are disregarded.

**TABLE 4TWO : Emission Release Rates**

<b>POLLUTANT RELEASE RATES</b>	
<b>CONCENTRATION</b>	<b>mg Nm<sup>-3</sup></b>
NOx, as NO <sub>2</sub>	300
TPM as PM <sub>10</sub>	100
Carbon monoxide	100
Hydrogen chloride	100
$\text{Nm}^3 \text{ re } 273\text{K, 101.3 kPa, dry gas corrected to 11% v/v oxygen}^{\text{REF2}}$	
<b>MASS FROM CREMATOR g s<sup>-1</sup></b>	
NOx, as NO <sub>2</sub>	0.057
TPM as PM <sub>10</sub>	0.019
Carbon monoxide	0.019
Hydrogen chloride	0.019

**4.3 OUTLINE D1 CALCULATION**

Oxides of nitrogen expressed as NO<sub>2</sub> @  $300 \text{ mg Nm}^{-3}$  presents the dominant pollution index for the D1 calculation (Pi at  $324$  to  $518 \text{ m}^3 \text{ sec}^{-1}$ ). For this study it has been ‘assumed’ that 100% of the NOx will be NO<sub>2</sub>; this approach introduces a substantial safety margin in the stack height determination.

Short term ambient guideline and background values have been used as originally presented in the D1 publication, using current UK statutory short term Air Quality Standards and by reference to current local air quality values in Tewkesbury. With respect to the latter, reference has been made to the 2023 version [latest publication] of the Tewkesbury Borough Council Air Quality Status Report as presented at 61211-DOSSIER FOUR. With respect to nitrogen dioxide this report states that >>>QUOTE:

- *The main pollutant of concern in Tewkesbury is nitrogen dioxide (NO<sub>2</sub>). In December 2008, an Air Quality Management Area (AQMA) was designated for exceedance of the annual mean NO<sub>2</sub> Air Quality Strategy (AQS) objective of 40 µg m<sup>-3</sup>. However, due to continuous improvements in NO<sub>2</sub> levels and no exceedances of the objective level in since 2015 the AQMA within Tewkesbury has now been revoked as of the 1st August 2022.*

...and concludes that >>>QUOTE:

- *All monitored sites met the NO<sub>2</sub> annual mean AQS objective of 40 µg m<sup>-3</sup> in 2022. Recorded 2022 data levels remain very similar to 2021 but continue to show an overall downward trend.*

Monitoring Stations referred to in the Air Quality Status Report that are located in closest proximity to the Shannon Place operation are 41N, 53N and 57N with reported respective NO<sub>2</sub> ambient mean concentrations of ~24 µg m<sup>-3</sup>, ~16 µg m<sup>-3</sup> and ~14 µg m<sup>-3</sup>.

The full D1 calculation for the two guideline and background value scenarios is shown at 61211-DOSSIER FIVE where stack height values of 9.7m and 11.9m are derived.

#### **4.4 D1 CONCLUSION**

D1 requires that calculated stack heights are rounded-up and therefore the minimum required stack height for the existing low capacity animal carcase cremator, when operated at 85 kg h<sup>-1</sup>, is 12 meters; accordingly the existing discharge stack will be extended to this height.

### **5.0 AIR QUALITY IMPACT SCREENING**

Environmental Agency Horizontal Guidance Note H1, at Annex F<sup>REF3</sup>, sets out the nationally recognized ‘first-step’ procedure for addressing the impact of emissions to atmosphere of pollutants from large-scale industrial processes that require to hold an ‘environmental permit’ to operate. The risk assessment procedure involves the following basic steps:

- (i) Quantify the emissions and characteristics of the emissions together with identification of any sensitive receptors;
- (ii) Calculate the concentration of emitted substances after dispersion into air as short term and long-term values;
- (iii) Screen out insignificant emissions that do not warrant further investigation;
- (iv) Decide if detailed air modelling is required and for which pollutants.

The H1 Tool specifies that process contributions can be considered insignificant and therefore no complex dispersion modelling is required when:

- the long-term process contribution is <1% of the long-term environmental standard; **and**
- the short-term process contribution is <10% of the short-term environmental standard; **and when**
- the long-term process contributions plus the existing background ambient air concentrations are <70% of the respective environmental standards.

The H1 Tool categorically states that detailed modelling is **not** warranted for small, low risk releases such as boilers/combustion processes with a thermal input less than 20MW and small point sources such as vents and short stacks. As calculated in 61211-DOSSIER FIVE, the new thermal input for the *SHANNON PLACE* establishment is only 0.3MW that is ~66-times below the thermal guidance threshold. Accordingly formal H1 screening is definitely considered not to be warranted as part of this application.

## 6.0 COMPLIANCE WITH EMISSION LIMITS & OPERATIONAL SPECIFICS

Table 4.1 of Process Guidance Note 5/03(2013)<sup>REF1</sup> sets out the emission to atmosphere discharge concentration limits for animal cremators; these limits are as follows:

Process Guidance Note 5/03(2013) <sup>REF1</sup> Emission Limits	
Total particulate matter	100 mg Nm <sup>-3</sup>
Hydrogen chloride [excluding particulate matter]	100 mg Nm <sup>-3</sup>
Carbon monoxide [Hourly average] <i>/95% of 10-minute averages in any 24-hour period</i>	100 mg Nm <sup>-3</sup> 150 mg Nm <sup>-3</sup>
Organic compounds [excluding particulate matter]	10 mg Nm <sup>-3</sup>
Nm <sup>3</sup> = reference conditions being @ 273.1K, 101.3kPa, 11% oxygen on a dry gas basis	

Animal cremators are designed to achieve the above limits WITHOUT the provision of physical abatement systems other than controlled secondary combustion. The DEFRA approved *SUREFIRE SA50/3* pet cremators are provided with secondary combustion chambers in which all combustion off-gases from the primary combustion chambers are raised to at least 850°C and held at above this temperature for a minimum of 2-seconds under turbulent air flow characteristics and in the presence of oxygen at a tension of greater than 3% at all times and at an average oxygen tension of greater than 6%; these design and operational factors being as quoted at Clause 5.3 of PG5/03.

The DEFRA approved *SUREFIRE SA50/3* pet cremators are supplied “off-the-shelf” without facilities for continuous emission monitoring other than for the necessary temperature driven automatic interlocking; this is in consequence of the low capacity of these designs of unit that are

intended for use at the *SHANNON PLACE* establishment. This can be confirmed by contacting>>>

[REDACTED]  
**Managing & Technical Director**  
Matthews Environmental Solutions Limited, Hyde, Cheshire, SK14 4NL  
[REDACTED]  
[REDACTED]

All small scale establishments throughout the UK operate without any reference in their respective EPR Permits to continuous monitoring; in fact few EPR Permits even require non-continuous emission to atmosphere testing when only small capacity cremators are involved. In this regard, of particular relevance is to be aware that the earlier version of PG5/3 was supported by “Additional Guidance Note AQ5(04) entitled *Animal Carcase Incinerators : Lower Capacity Threshold*”. The reason for the publication of AQ5(04) was because PG5/3 [“the parent note”] addressed animal carcase incineration from the range 50 kg h<sup>-1</sup> to up to circa 800 kg h<sup>-1</sup> (based on a practical operational day of 12-hours). Operations at the *SHANNON PLACE* Crematorium will lie very much at the lower end of this cremation capacity range for which the earlier DEFRA publication “Additional Guidance Note AQ5(04) entitled *Animal Carcase Incinerators : Lower Capacity Threshold*” is the more relevant.

Accordingly, the position of the Applicant is that the latest 2013 version of PG5/03, that now incorporates the provisions of AQ5(04), does NOT require continuous emission monitoring equipment for the smaller scale of operations. As stated above, the pet small pet cremators at the *SHANNON PLACE* establishment are to be equipped with automatic interlocking against loading of the primary chambers until the 850<sup>0</sup>C secondary chamber temperature has been attained.

To further support the Applicant’s position, attention is drawn to the omission of reference to emission limit values and any requirement for non-continuous monitoring in the model Permit Conditions as suggested as Conditions 1 to 14 at Page 39 of Process Guidance Note 5/03<sup>REF1</sup> and as reproduced at 61211-DOSSIER SIX.

## **7.0 SUMMARY IMPACT ASSESSMENT**

TABLE 7ONE overleaf below provides a summary of possible impacts associated with the operation of the two small pet cremators simultaneously; these impacts are tabulated together with ratings of their potential to cause concern. The ratings are categorised as:

- L = none/low
- M = moderate
- H = high.

**TABLE 7ONE: IMPACT SUMMARY**

PROCESS	POTENTIAL IMPACTS				
	NOISE	LAND (Solid waste)	CONTROLLED WATERS (Liquid waste)	ODOUR	AIR
Cadaver receipt & storage	L	L	L	M	M
Cremations	M	L	L	L	M
Cremator de-ashing	M	L	L	L	M
Ash disposal	L	L	L	L	L

**7.1 Control of Impacts**

Importantly, operations at *SHANNON WAY* will essentially mimic procedures at other operational Sites that have enjoyed consistent approval by the Animal & Plant Health Agency certification inspections and Local Authority Regulatory Officers.

**7.1.1 NOISE**

Operations will not give rise to any off-site noise issues. The most noise generated within the installation will originate from vehicle deliveries and on-site vehicle movements. Stack efflux noise will be marginal.

**7.1.2 SOLID WASTE**

Solid waste arisings at the installation will present no operational issues. The principal ‘waste’ is cremator ash that is essentially inert and that is either returned to the pet owners or disposed by routing to the *VETSPEED Ltd*’s Cambridge facility.

**7.1.3 LIQUID WASTE**

There are no liquid waste streams associated with the cremator operation.

**7.1.4 ODOUR**

Cadaver receipt can be associated with minor odour generation; however, the installation has the option for immediate cremation or storage under refrigeration that historically has been proven to prevent any off-site odour problems.

**7.1.5 AIR**

No significant air impacts will be associated with operation of the two cremators; the maximum likely pollutant emission mass release rates are:

<b><u>MAXIMUM MASS RELEASE FROM BOTH CREMATORS IF OPERATED CONCURRENTLY &amp; AT FULL LOAD</u></b>		<b><math>g\ s^{-1}</math></b>
NOx, as NO <sub>2</sub>		0.057
TPM as PM <sub>10</sub>		0.019
Carbon monoxide		0.019
Hydrogen chloride		0.019
TOC, as C		0.0019

Any issue of sulphur dioxide emissions is negated as only low sulphur content kerosene will be used to fuel the cremators.

#### **7.1.6 FUEL STORAGE**

The existing kerosene storage arrangement will be sufficient for the intended uplift in throughput.

#### **7.1.7 UPSET CONDITIONS**

There are no foreseen implications with respect to noise or solid waste or liquid in the event of upset conditions. A burner malfunction could result in a short duration dark smoke emission pending cremator shutdown and such cremator shutdown could demand change-over of one cremator's load to the second cremator; these are unlikely scenarios but not impossible.

#### **7.1.8 FIRE**

The site layout and routine operational practices are inherently designed to minimize the risk of fire.

All employees will have received proficient information, training and instruction with respect to fire prevention. The Fire Authority will be aware of the presence of proposed operations and will be consulted with respect to all associated issues

### **8.0 CONDITIONS OF EPR PERMITTING**

PG5/03(2013)<sup>REF1</sup> includes a Model Permit, as reproduced at 61221-DOSSIER SIX, that cites the appropriate Model Conditions of EPR Permitting for animal carcase processes sized at a throughput of up to 1,000 kilograms per hour and less than 10 tonnes per day. Of importance is to be aware is that the cited Model Conditions can and very often are modified, but remain in accordance with PG5/03(2013); this is particularly relevant in situations such as the *SHANNON WAY* development where the throughput put is very low i.e. only 85 kilograms per operational hour absolute maximum.

\*\*\*\*\*END\*\*\*\*\*

## **REFERENCES**

REF1 Process Guidance Note 5/03 (2013) – Guidance for Animal Carcase Incineration: disposal rate of >50 kilogrammes per hour and capacity of under 10 tonnes per day

REF2 HMIP publication “*Technical Guidance Note (DISPERSION) [D1]*” Guidelines on Discharge Stack Heights for Polluting Emissions

REF3 Environmental Agency Horizontal Guidance Note H1: Environmental Risk Assessment. “H1 Annex F – Air Emissions”